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Los Angeles Section

Monthly: Est. 1913

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PRESIDENT'S MESSAGE

Kathereen Shinkai, P.E., M.ASCE Los Angeles Section President

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Season's Greetings!



The holidays are here once again! The year sure went by very quickly. This is the month when most of us, one way or another reflect on our lives. We think about our families, friends, and careers and general life path. For this month's article, I would like to share with you some of the things I have been involved with since I have been President of the LA Section.

My first trip was in September when I went to the ASCE's headquarters in Reston, Virginia to attend the ASCE

Presidents and Governor's Forum. I had the opportunity to fly with **Jeff Braun**, the OC Branch Vice President and also meet up with **Julian Garcia**, the MLA Branch President and **Steve Tanaka**, the San Luis Obispo President from our LA Section. We had dinner to socialize with other Presidents and Vice Presidents of the various Sections and Branches. The next day, we broke up into groups and had different topics to discuss and tackle. I also had the opportunity to run two sessions and speak about our LA Section Life Member Forum. As you all know, our Life Member Forum has been viewed by ASCE leadership as a successful model for everyone to follow.

I also had the opportunity to attend the ASCE National Convention in Portland, Oregon from September 28th to October 1st. We had a huge Los Angeles Section attendance at this convention. The convention gave opportunity to interact with professionals in the industry and attend educational sessions and technical tours which focused on sustainable design. We all learned a lot of new technology from the many case studies that were presented, but we also had a chance to meet new people and also interact and hang out with people that are in the LA Section in a fun environment. We also talked to our **Society President, Norma Jean Mattei** and she mentioned how excited she is to visit the Orange County Branch for their History & Heritage and Student Night in November and also the LA Section in January for the Workshop for Section and Branch Leaders (WSBL), the Western Region Younger Member Council (WRYMC), and the Workshop for Student Chapter Leaders (WSCL) and in March for the Life Member Forum Brunch.

I would like to congratulate **Ravi Shah**, **PE** for receiving the Edmund Friedman Young Engineer Award for Professional Achievement and the **Orange County Younger Member Forum** for receiving the Younger Member Group Award for Large Groups. All of us were excited to be able to watch Ravi accept these awards. In between sessions, we also did a little bit of sightseeing around Portland and walked across the Tilikum Crossing which was fun. This bridge serves city buses and the Portland street car, as well as bicycles, pedestrians, and emergency vehicles. It is the first major bridge in the United States that allows all access to transit vehicles, cyclists and pedestrians but not private cars or trucks.

State Investments and Legislative Update

by Richard Markuson, CA Region 9 Legislative Advocate



The Legislature is in recess and the "special transportation session" called by Brown two years ago expired at the end of November.

Recent Reports

The Environmental Integrity Project released Arsenic in California Drinking Water "More than three years after the U.S. Environmental Protection Agency found California in noncompliance with the federal Safe Drinking Water Act, 95

community water systems in the state, serving more than 55,000 people are still providing water with illegal levels of arsenic, according to an examination of state date for the last two years. Arsenic occurs naturally in the soil and groundwater in parts of California and is a known carcinogen that may also damage the developing brains of children and cause other health problems. Many of the people drinking excessive levels of arsenic are poor and/or Latino or African American, with a cluster in the San Joaquin Valley."

The Delta Stewardship Council released a new online database, DeltaView, which is designed to allow visitors to track projects in the Delta by gleaning information such as project goals and descriptions, cost and funding sources, key dates, responsible agencies, and relevant performance measures. DeltaView is now available for Beta testing by the public. The reporting tool is intended to improve in communication between agencies, stakeholders, and the public as it promotes transparency, tracks performance, and fosters collaboration.

U.S. Department of Transportation released Federal Automated Vehicles Policy: Accelerating the Next Revolution in Roadway Safety. The automobile industry is rapidly making advancements in the production of cars capable of driving themselves with minimal human involvement. California has been a center of development for these autonomous vehicles. The hope is that self-driving cars can help reduce the 35,000 roadway fatalities in the US, as well as increase the infrastructure capacity of current roadways while providing a benefit to those with disabilities who cannot drive themselves. The US Department of Transportation has produced a Federal Automated Vehicles Policy, with the goal of supporting these developments and ensuring "these technologies are safely introduced..., provide safety benefits today, and achieve their full safety potential in the future."

Congressional Research Service released Sea-Level Rise and U.S. Coasts: Science and Policy Considerations. "Policy choices related to sea-level rise have the potential to shape the future development and resiliency of U.S. coasts. Policy options include a continuation of current government programs and policies, actions that address the forces contributing to sea-level rise globally or locally, and actions that reduce the vulnerability to and consequences of sea-level rise on U.S. coasts. For all the policy options, there are underlying questions of costs and benefits and who bears the costs of pursuing or not pursuing the policies."

BuildZoom released *Can U.S. Cities Compensate for Curbing Sprawl by Growing Denser?* "The U.S. population is projected to continue growing for decades to come, reaching 400 million circa 2050. Accommodating more people at current living standards will require many new homes, but how will cities deliver such housing?" Expanding the size of cities is often opposed in California as "sprawl". However, "[c]ities that have curbed their expansion have – with limited exception – failed to compensate with densification. As a result, they have produced far less housing than they would otherwise, with severe national implications for housing affordability, geographic mobility and access to opportunity, all of which are keenly felt today as we approach the top of another housing cycle."

CA State Assn. of Counties and the League of California Cities release biennial road conditions report, "2016 California Statewide Local Streets and Roads needs Assessment Report" finds "only six counties have roads in 'good' condition compared to 16 counties in 2008" and "\$3.5 billion is needed annually just to maintain local streets and roads in their current condition, however, current funding lags behind at just \$1.9 billion per year."

State Water Resources Control Board has released a report on water conservation by urban districts during the month of August, finds usage was down 17.7 percent compared to August 2013, says conservation total is "raising concerns that some water suppliers are abandoning their focus on conservation as California heads into a possible sixth drought year."

American Institutes for Research released STEM 2026: A Vision for Innovation in STEM Education. This report outlines six core principles in STEM education, as formed in a series of recent workshops sponsored by the U.S. Department of Education. These "interconnected components" are: 1) "engaged and networked communities of practice," 2) "accessible learning activities that invite intentional play and risk," 3) "educational experiences that include interdisciplinary approaches to solving 'grand challenges'," 4) "flexible and inclusive learning spaces," 5) "Innovative and accessible measures of learning," and 6) "societal and cultural images and environments that promote diversity and opportunity in STEM."

The Lancet released Urban Design, Transport, and Health (Free registration required) "Worldwide, the majority of people already live in cities and by 2050, it is estimated that 75% of 10 billion people have cities as an important social determinant of health. Air pollution, physical inactivity, noise, social isolation, unhealthy diets, and exposure to crime play a very important part in the non-communicable disease burden. This 3-part Series explores how integrated multisector city planning, including urban design and transport planning, can be used as an important and currently underused force for health and wellbeing within the framework of the Sustainable Development Goals in both high-income countries and low-income and middle-income countries."

PRESIDENT'S MESSAGE continued from page 1

I also wanted to share something very exciting I learned at the Convention. All of us had a chance to see the rough cut screening of the "Dream Big: Engineering Wonders of the World" movie. In partnership with MacGillivray Freeman films, and presented by the Bechtel Corporation, ASCE will be doing a premier on giant-screen theaters throughout the nation in February during Engineer's Week.

"ASCE has indicated that combined with educational programming and powerful media, *Dream Big* will:

- Inform the public about the important work engineers do, helping to heighten interest and change perceptions about the profession.
- o Inspire young people to consider careers in engineering.
- o Answer the demand for K-12 engineering education resources, in alignment with the Next Generation Science Standards."

The movie was amazing and I was inspired. I wish I could have seen a movie when I was younger to understand what engineers of all fields do and how we as engineers change the world to make it better. The film educated the different engineering projects and showed how kids are currently involved by participating in the different engineering activities that are fun but also educational. The audience at the convention really enjoyed the movie and I can't wait for ASCE LA Section and the Branches to share this with the entire membership. I would recommend this 45-minute movie to people of all ages. LA Section will be involved in getting the word out to everyone as the new year comes and will have special activities planned for this. Stay tuned!

I hope everyone has a safe holiday season and I hope to see all of you soon at one of the many ASCE activities/events to choose from.

ARTICLE

Los Angeles Section Monthly ASCE Advertisement



The U.S. Army Corps of Engineers, Los Angeles District, seeks a Hydraulic Engineer / Hydrologist specializing in Flood-Frequency Analysis to join our Engineering Division. The work covers projects in California, Arizona, Nevada, Utah, New Mexico, & portions of Idaho,

Colorado, Wyoming & Texas. This large area exhibits complex & diverse climates, & a broad range of hydrometeorological, hydraulic, & fluvial geomorphologic characteristics. Terrain varies from flat delta to rugged mountains to desert. This opportunity offers qualified candidates the chance to apply their expertise & leadership skills for determining & assessing hydrologic requirements for analysis & design of large & complex structures. Civil Works studies include such projects as analysis & design of levees & channels; water supply or drought analysis; river restoration; groundwater/surface water interaction, water control & conveyance facilities, dams of all types & sizes & their impacts on flood-frequencies; reservoir re-operation; dam safety studies; debris yield analysis; & risk and uncertainty analyses.

Qualified candidates will have experience in hydrology & flood-frequency analyses, and/or debris yield analysis & groundwater modeling. Additional requirements include:

- A civil engineering degree, a hydrology degree or a physical or natural science degree from an accredited four year university.
- A Professional Engineer license or a Professional Hydrologist certification.
- Experience in hydrologic engineering analysis & flood-frequency analyses.
- Experience in performing hydrologic analyses for extreme storms.
- Experience in hydrology for major regional projects.

- Effective written & verbal communicate skills. Position requires extensive report preparation & other written documentation (guidance document development, research papers, memorandum for records & official correspondence)
- Experience in external coordination & presenting hydrologic information to peers & superiors.
- Experience with mentoring & teaching other hydrologists & hydraulic engineers.
- Expert witness experience is a plus.
- Debris yield analysis, groundwater modeling & contaminant transport analysis within groundwater aquifers & risk analysis are a plus.

This is a permanent full-time position. Position will be filled at a Regional Technical Specialist GS-13 level, annual salary range: \$94,264 to \$122,549. Excellent benefit programs which may include: comprehensive health & life insurance, retirement program, paid holidays, sick leave, annual leave, flexible work environment & alternate work schedules, paid employment related training & education, possible payment of licenses, & advanced training as applicable.

The open period for application is Thursday, December 1, 2016 to Wednesday, December 14, 2016. To apply, go to www.usajobs.gov & search for Control Number 452973500 for federal employees or 452973600 for non-federal employees. It is imperative that the instructions be followed precisely as eligibility determination is electronically determined based on information provided & responses provided during the on-line application process.



www.ascelasection.org

ASCE Region 9 Has a New National Historic Civil Engineering Landmark

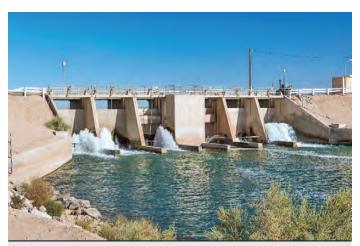


by Andrew Machen, P.E., M. ASCE, Vice-Chair, ASCE Region 9 History & Heritage Committee



The San Diego Section has been successful in getting the All American Canal in Imperial County designated by ASCE as a National Historic Civil Engineering Landmark. A dedication ceremony will be held on December 19, 2016, starting at 10:30 A.M. PST (11:30 A.M. MST) at the Hidden Shores Village resort, just north of the Imperial diversion dam on the Colorado River.

The All American Canal (AAC) system was authorized by the US Congress on December 31, 1928 as part of the Boulder Canyon Project Act. Other elements of this authorization included Boulder (now Hoover) Dam, Imperial Dam, and the Coachella Canal. Groundbreaking ceremonies were held on December 16, 1934 at "Potholes" (the site of Imperial Dam) in the morning and at Calexico, 70 miles away, in the afternoon. Actual construction took place from 1935-38 with the first water deliveries made in 1940. The canal system was fully operational that year and became the sole source of water for the Imperial Valley by 1942. The AAC system has had few improvements or major repairs since being completed nearly 75 years ago, a testament to the quality and durability of the original design and construction. Hydroelectric facilities have been added from shortly after completion of the canal, up until the mid-1980s. Off-line storage facilities were added between 2008 and 2010 in the form of Brock Reservoir near Drop 2 and as part of the AAC lining project.



Based on innovative design features and the ability to foresee future environmental impacts, the All American Canal System has withstood the test of time.

Losses due to seepage from the canal were known to be problematic and constituted a loss of 70,000 acre feet per year. These losses were originally considered unrecoverable. A solution was authorized by Public Law 100-675 in 1988, a final Record of Decision was signed in

1994, design of a 23 mile lined, parallel canal was authorized in 2006, and construction of the canal lining project was completed in 2010.

The National Historic Civil Engineering Landmark nomination package, several articles on the history of the All American Canal, and a flyer announcing the ceremony can be accessed at the following website: http://67.225.175.189/ASCE-Region-9-Landmarks/SanDiegoSection/All-Landmarks/AllAmericanCanal/all-americancanal-links.htm

A link from that site displays a map showing the location of the ceremony along with driving directions from anywhere on the continent.

The San Diego Section package is an excellent example of how to construct a nomination and has the potential to serve as a model for future nominations for the entire region.

A map showing all National Historic Civil Engineering Landmarks in Region 9 can be accessed at: http://67.225.175.189/ASCE-Region-9-Landmarks/1-Region9/National-Landmarks/load-region9-national-landmarks-map.htm.

An interactive map showing all Section boundaries with links to their Historic Civil Engineering Landmarks can be accessed at http://67.225.175.189/ASCE-Region-9-Landmarks/. A mouse-click within a Section area will display a map of the Branches within the Section.

The maps will always be a work in progress as Sections designate local projects as historic landmarks. Efforts are underway to establish a History & Heritage page on the Region 9 website, which will include a feedback form where members can post articles about history-related subjects and submit suggestions for projects to be considered as historic civil engineering landmarks.

If you have any questions about the Region 9 History and Heritage Committee, please feel free to contact me at andrewmachen@rivsan.com



New Governor Perspective

by Thor Larsen, P.E., M.ASCE, ASCE Region 9 Governor from the Sacramento Section



Back in 2005, a friend asked if I would want to become a volunteer officer with ASCE. I thought, yes, that will be great! It would be a great chance to enjoy working and sharing ideas with my fellow civil engineers outside my immediate workplace, and a chance to reconnect with students beyond hiring new grads in my workplace. My first work was as Treasurer for the Capital Branch of the Sacramento Section (at the ripe old age of 45!), and it's been a fantastic 11 years

now in the trenches, including serving as President of the Capital Branch, and subsequently the Sacramento Section. I recently served as chairman for the 2016 ASCE Region 9 California Infrastructure Symposium hosted in Sacramento last March. This event was a great success and very well received by all. Students and professional attendees (and yes, even all the speakers) enjoyed the chance to learn about our infrastructure needs, and how we as civil engineers can help educate the public as to the best ways to improve our quality of life through investment in infrastructure.

This is my first term as a Society-level Governor, representing Region 9 (which comprised the State of California). My civil engineering work outside the ASCE arena has been nicely varied. This career includes 17 years working for Caltrans in bridge construction and design, then 7 years as a consultant, and most recently 8 years with El Dorado County. My current (and hopefully final) employment is with HDR, an employee owned Engineering and Architect firm. The opportunity to work on both the owner and the consultant side has provided me a broad perspective. One goal that I would really enjoy experiencing would be to have more public employees active again in ASCE. It's a great organization!

In September, I was installed as Region Governor at the ASCE Headquarters in Reston, Virginia during the President and Governors Forum-Leader Orientation session. It was a great experience for me to be there. A visit to the Society Headquarters provides engineers like me with the chance to see how ASCE delivers programs and creates products for us to use as ASCE members. These tools include: having an incredible library of technical learning publications, and documents on the history and heritage of civil engineering; and providing guidance for effective legislative outreach, and strategies on how to help increase ASCE membership at our local levels.

It's been a good experience to re-read our ASCE Strategic Initiatives, including what the goals are, and why they are important to civil engineers http://www.asce.org/our_initiatives/. These goals to me are straightforward, necessary, and attainable. The first initiative addresses **Sustainable Infrastructure**, and has a focus to maintain and modernize America's deteriorating infrastructure as well as making our communities sustainable. This would involve creating

additional awareness to the public of our infrastructure funding needs, through National, Regional, and Section Report Cards.

Another key initiative is the **ASCE Grand Challenge**, which challenges civil engineers and the industry to seek to close the infrastructure funding gap. Wow, what a challenge! But isn't that the kind of enterprise we all as civil engineering students hoped to be a part of, when beginning and then completing our studies? The idea of using less materials, or better materials which last longer, via innovative design and construction methods, is a very worthy goal. I completely embrace this challenge, and I hope to have made some impact and headway during my remaining career. There is no doubt many of you may have had the same aspirations to make this kind of impact, and I invite you to join in the Grand Challenge http://www.asce.org/grand-challenge/.

The final ASCE strategic initiative is **Raise the Bar**, which seeks to align engineering education in an ever changing world! I personally believe that this is a worthy endeavor to help prepare future engineers to address a greatly expanding civil engineering body of knowledge. During my three-year term as a Region Governor, I plan to work closely with the various ASCE local groups to conduct outreach within our current membership to spur them to be more active, and also to provide for outreach to those who might have discontinued their membership for various reasons. I believe that all civil engineers should be encouraged to get more or our fellow colleagues, and future engineers, to join and be active in ASCE. Just like my friend, Greg Zeiss, the Section President did to recruit me as a volunteer back in 2005, I hope to pay it forward, and seek to encourage others to volunteer as well. It will be an honor and a pleasure to enjoy and serve these next 3 years as Governor, and I look very forward to meeting and working with many of you within Region 9!

If you have any questions or need further information, please feel free to contact me at Thor.Larsen@hdrinc.com





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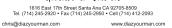
















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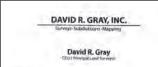


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